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Usability and Accessibility Evaluation of Political Party Websites in Nigeria

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Abstract— In this digital age, political party websites serve as pivotal tools for communication, information dissemination, and civic engagement. However, the effectiveness of these websites depends on their usability and accessibility, particularly in a diverse and dynamic context such as Nigeria. This study assesses the usability and accessibility of eight popular political party websites in Nigeria by using four automated tools which are AChecker, Web Accessibility Evaluation (WAVE), Test Accessible Web (TAW), and GTMetrix. The websites include All Progressives Congress (APC), Peoples Democratic Party (PDP), New Nigeria People's Party (NNPP), All Progressives Grand Alliance (APGA), Labour Party (LP), Social Democratic Party (SDP), Accord Party (Accord), and African Democratic Party (ADP). The findings, after multiple testing on the tools, revealed disparities among the websites. APC's website emerged as the most balanced, with strong HTML5/ARIA adoption and moderate structural soundness, though its performance was weakened by slow load speeds. The APGA website was the fastest and most stable, generating few errors or alerts. However, it provided almost no accessibility features. The results further show that all the websites of all the evaluated political parties have usability and accessibility issues which is a violation of Web Content Accessibility Guidelines (WCAG 2.0). Our evaluation indicates that none of the Nigerian political party websites fully comply with modern accessibility and performance standards. These findings highlight the need for web developers to carefully consider established design guidelines when developing and maintaining political party websites.

Keywords— Usability, Accessibility, Political Party Websites, WCAG2.0, Website Evaluation tools.

I. Introduction

The growing adoption of Information and Communication Technology (ICT), especially the Internet, has significantly reshaped the way organizations, including political parties' function [1]. In this digital age, political engagement increasingly dependent on online platforms, making the usability and accessibility of political party websites crucial for fostering inclusive participation [2], [3]. The websites of political parties serve as key information hubs for party policies, candidate profiles, and electoral processes.

In recent years, the internet has become an essential tool for political communication and engagement. It offers political parties an effective platform to disseminate information, mobilize supporters, and garner public backing. In Nigeria, where democracy is evolving and political participation is increasingly digitized, the usability and accessibility of political party websites are critical in shaping how citizens perceive and engage with the political process. Also, internet penetration rate in Nigeria has continued to grow and hence websites serve now serve as a vital tool to disseminate political information by political party members. electoral processes. At present there are over 100 million internet users in the country and the number is expected to increase to about 103 million by 2027 [4], [5]. With the return of the country to democracy since 1999, various political parties have emerged and merged. According to the Independent National Electoral Commission (INEC), Nigeria has 19 registered political parties and each of them is to intimate the public with their manifesto [6]. Apart from public or open campaign, one-way citizen can know more about them is via their websites. Hence, it is expected that with a click of the button vital information needed by the citizen and party member should be readily available and accessible online. In order to ensure this, the various website must comply with accessibility guidelines. However, the effectiveness of these political party websites in reaching diverse user groups, including individuals with disabilities, remains largely unexplored.

A website must be user-friendly and accessible to all categories of users including people with special needs and

older adults [7]. Everyone, including the elderly and disabled people has the right to access the Internet for using a variety of different websites [8]. The web has diverse users with each exhibiting needs based on their ability to interact, understand, perceive and navigate with web contents. For example, accessing textual information by visually impaired users differs from those with good sight [9]. The primary purpose of political party websites is to facilitate effective communication with voters, clearly articulate the party's policies, and provide compelling reasons why the party deserves electoral support. It is aimed to support each party in the direction of effective communication and services to the public or citizens via the websites [3], [10]. Unfortunately, many political party websites in Nigeria are designed primarily for representation rather than interaction the citizens. This is due to the fact that their websites are not effective, efficient and satisfactory enough to the users. They often fail to meet accessibility and usability standards, making it difficult for individuals with disabilities and those who are less tech-savvy to access information and services [11]. This lack of accessibility and usability has contributed to the marginalization of some political parties, limiting their recognition and engagement with the public [12]

Authors from various countries have carried out research on evaluating the accessibility and usability of different genre of websites in education, banking, airline, government, e-commerce and many others [7], [13], [14], [15], [16], [17], [18], [19], [20], [21]. Till date, little or no attention has been paid to political parties' websites evaluation especially in developing countries where democracy is being practiced or where political parties exist. Hence, this study evaluates the usability and accessibility of political parties' websites in Nigeria, with the aim to confirm their adherence or otherwise to international web standards such as the WCAG.

The study closely examines the design elements, navigation efficiency, readability and assistive technology compatibility of Nigerian political parties' websites. It highlights the potential barriers that may exclude certain demographics from assessing the websites. The comprehensive findings provide insights into the current digital inclusivity of Nigerian political parties and offer recommendations for improving user experience, ultimately contributing to more accessible and democratic online engagement. To the best of the authors knowledge, this paper represents the first attempt to evaluate the usability and accessibility of political websites in Nigeria.

The remaining part of the paper is structured as follows: Section II provides the review of literature focusing on website accessibility, usability and review of related works. Section III discusses the methodology while section IV and V present the discuss of results and conclusion respectively.

II. LITERATURE REVIEW

A. *Web Accessibility and Usability*

Web accessibility refers to the development of websites and digital content (e.g., multimedia, images, audio, text, video,) that diverse users, including those with disabilities can use. Accessibility ensures that all users can interact with, navigate, perceive, comprehend and contribute to the Web without encountering barriers [22], [23]. Web accessibility also benefits other people, including elderly people whose abilities have declined as a result of age [13]. Web developers must ensure that their websites are accessible according to WCAG for people with different range of abilities. These guidelines aim to eliminate barriers for individuals with visual, auditory, physical, speech, cognitive, and neurological disabilities, making web content accessible to everyone. Accessibility is aimed at eliminating any form of limitations encountered by people having any type of disability [24].

Usability, on the other hand, refers to the quality of users' experience when interacting with a system. Consequently, it is an important consideration in the design and development of websites. Website usability refers to the extent to which a website can be used to achieve specific goals, such as service delivery and user engagement, with effectiveness, efficiency, and satisfaction [23], [24], [25] . Poor usability can significantly deter user engagement, reducing satisfaction and potentially leading users to abandon a site [26]. A system design with diminished usability reduces the effectiveness of users and effectiveness, thereby diminishing the overall value of the website. Factors such as loading speed, page size, broken links, and accessibility errors can all impact usability Therefore, it is imperative for web designers to create websites that are effective, efficient, and usable by everyone, including individuals with disabilities. Failure to do so can negatively impact users' attitudes, satisfaction, and trust in the information and services offered on the website. Difficult to use websites are not appealing to users as it will often be abandoned by them. Thus, usability and accessibility are crucial components of political website design.

Political party websites are intended to be accessed and used by a diverse population, including both able-bodied users and users with disabilities. Henceforth, there is need to incorporate usability and accessibility guidelines in the design of the website. These guidelines are critical for developers to ensure that websites are accessible to all users. For example, a person with visual impairments may require screen reader technology, while color contrast is

crucial for users with blurred vision [27]. Various online accessibility tools such as AChecker and WAVE are available to evaluate website accessibility and usability [28]. These tools assist Human Computer Interaction (HCI) researchers in adhering to Web Content Accessibility Guidelines (WCAG) guidelines [29]. World Wide Web (W3C) has developed WCAG to make the web accessible to people with disabilities. The WCAG 2.0 was approved as an ISO standard. The WCAG 2.0 outlines four key principles known as POUR: Perceivable, Operable, Understandable, and Robust. These principles are categorized into three levels of conformance: Level A (basic), Level AA, and Level AAA (highest). Unfortunately, many websites are not designed and developed in accordance with these accessibility standards. Hence, it is difficult for people with some kind of disability to get complete access to the information and services available on the website [30]

The quality assessment of websites has attracted the attention of many researchers globally. Hence, numerous researchers are focused on evaluating the usability and accessibility of websites across various domains so that that digital content and services are accessible to everyone [31], [32], [33]. Some of these studies are presented in the next section

B. *Review of Related Works*

As pointed out earlier, only few studies have focused on evaluation of political parties' websites evaluation till date and they are presented as follow. Lappas and Yannas [34] proposed a framework for evaluating political party websites so that the parties will upgrade their political activities and facilitate their operation in e-democracy. It focusses on four main maturity stages comprising online presence, interaction e-democracy and integration stages. The main approach is to see how evaluation of political websites could be done but automated tools were not used in the study.

Study by Schweitzer [35] focused on evaluation of German political parties during the election year of 2002. The study provided an integrated qualitative analysis of content related, functional and formal aspect of the websites. Four parameters of accessibility, navigation, design and updating were considered in the study. It was discovered that the websites only offered informational content while neglecting interface features. However, today's websites should focus more on the ability of the users to navigate easily the information provided on the websites which can only be made possible via good interfaces.

Abdillah et al.,[36] evaluated the seventeen official political websites in Indonesia. Website evaluation questionnaire (WEQ) and GTMetrix were used for the manual and automated evaluation of the websites. Results obtained from GTMetrix revealed that a greater percentage of the websites (41.2%) got grade D, while other scores E, C, F and B with corresponding percentages of 23.5%, 17.6%11.8% and 5.9% in descending order of performance ratings respectively. This shows that most party websites need enhancements in both performance and structure in order to improve their scores.

Another study by King and Youngblood [37] focused on analysing the content and quality of county voting and election website in Alabama. A combination of automated tools (AChecker), heuristics and manual inspection were used to test for the website's usability, accessibility and mobile friendliness. The study found out that limited voting and election information are offered by these websites and more importantly, none of them are in full compliance with accessibility, usability and mobile friendliness guidelines. Crossland and Chigona [38] carried out an exploratory study that is sought to investigate the use of the Internet by political parties South Africa as well as the functionality and design of these websites. The study noted that in spite of the lower Internet accessibility rates in Africa, 72.5% of the political parties contesting the 2009 elections have websites. Also, the large political parties' websites have more functionality in their websites than the smaller ones and most of the websites lack navigation tips.

Study by Kaushik [39] which was on content analysis of political websites in India reveals that the majority of political party websites in India are building on different patterns, options and designs and have diverse information regarding their respective party history, constitution, logo, manifesto, photo gallery, current events, speeches, contact, and web 2.0 applications. Further results obtained from the study confirmed that some political party websites do not have essential contents such as date of updating, feedback/suggestion option, party membership information, option for disabled people, mobile applications, public forum, and soon. 8 political parties.

Another study Mochla and Tsourvakaswas [2] conducted to investigate the quality dimensions of the Greek Parliaments' political parties' websites in an off-campaign period, one year before the legislative elections of 2019. The hypotheses used in the research were based on political marketing background theory with emphasis on variables from different eservice quality models and effective web-design dimensions. Using a sample of 400 voters to make the survey, it was observed that the useful content and aesthetic design were the most significant dimensions of the voters' perception about the political websites' quality.

Political parties use websites it for a variety of purposes, including relationships with its supporters and potential voters. Hence, the website of any political party is an important channel of communication. Such a website

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should be user-friendly to various audiences. Sajna-Kosobucka and Sajna-Kunowsky [40] in their study assessed the quality of information architecture (IA) on the websites of the two major American political parties: the Republican Party and the Democratic Party. By using triangulation methods; a qualitative-heuristic assessment of the IA on the websites, expert assessment and a comparative analysis were conducted. It was observed that there was noticeable lack of some important components of the IA on the observed websites. Also, the website of the Republican Party is slightly better in terms of quality than the website of Democratic Party by 14.09%.

Table 1
POLITICAL PARTY WEBSITE URLS

Political Party	Acrony	URL
All Progressives	APC	www.apc.com.ng
Peoples Democratic	PDP	https://peoplesdemocratic
New Nigeria	NNPP	https://nnpp.net.ng
All Progressives	APGA	https://apga.org.ng
Labour Party	LP	https://labourparty.com.ng
Social Democratic	SDP	https://sdpnigeria.org
Accord Party	ACCORD	https://accordnational.com.
African Democratic	ADC	https://adc.org.ng

As it could be observed from the review above, most of the studies did not involve the use of automated tools to carry out the evaluation of websites and hence research a gap is created which is the essence this paper.

III. METHODOLOGY

This study selected only political parties whose websites are accessible at the time of carrying out this research though the country has nineteen registered political parties. The name and URL of the Political Parties website used in the study are shown in Table 1. Eight political parties who have functional websites were used for the study and the evaluation was done using four online automated tools: AChecker, WAVE, TAW and GTMetrix. The use of multiple automatic tools is necessary so as to get comprehensive reports, remove biases and ensure accuracy and comprehensiveness [18], [41]. Also, some tools could substitute deficiencies of other tools, making the evaluation more reliable. The URL of each website is entered into webpage of each automated tool which eventually evaluates the site and generated results. The evaluation is done repeatedly about three times over several weeks to ensure correctness and consistency of the results obtained. Online automated tools are evaluation software used to assess and measure the usability and accessibility of a website. These tools are accessible resources for any developer who wants to ensure that the site they develop conform to established accessibility standards. Most of the online automated tools evaluate web sites against accessibility guidelines. These include the Section 508, WCAG 1.0 and 2.0, the Stanca Act (Italian Accessibility Law), W3C's, BITV (web accessibility test of the German BIK project), RGAA (French Accessibility Law), or a combination of them. Some tools also have their own accessibility guidelines while some require the URL. Others require upload of HTML file or pasting of the HTML code. The tools are all mostly web-based hence, no need for download or installation.

The AChecker tool is an open-source web accessibility evaluation tool that checks web pages for compliance with various accessibility standards, such as WCAG 2.0. It provides detailed reports on issues and suggests ways to fix them. The results of this tool identify three categories of accessibility problems at each level: known, likely, and potential. Known Problems are confirmed accessibility failures (must be fixed), Likely Problems are strong indicators of problems but need manual confirmation and Potential Problems are Possible issues flagged by tools, require human judgment [42].

Web Accessibility Evaluation Tool (WAVE) helps users identify accessibility issues on web pages. It visually displays the results directly on the webpage, highlighting areas that need improvement according to WCAG guidelines. The WAVE tool evaluation produces a report detailing errors, alerts, features, contrast errors, structural element issues, and the use of HTML5 and ARIA within a webpage, According to WCAG. The WAVE helps its users better evaluate the things that automatic tools cannot check [43]. TAW (Test de Accesibilidad Web) tool is a Spanish web accessibility evaluation tool that analyzes web pages for compliance with accessibility standards, mainly focusing on WCAG 2.0. It generates a summary of an error on the analyzed page with suggestions for improvements. The TAW clearly marks the accessibility violations that it discovers by providing an annotated version of the website as well as recommendations on how to resolve them. This tool uses four principles such as perceivable, operable, understandable, and robust to check a website. TAW makes sure that information and interface components are well presented to the user in ways they can perceive. It checks how operable user interface components and navigation are. It checks how understandable the information and operation of the user interface are and checks the content of the site to ensure it can be interpreted enough [44]

GTMetrix is a speed test and performance monitoring tool that analyzes a website's page speed (structure) and performance using Google's Lighthouse. The tool focuses on user-centric metric provides a full report on a site's performance. It analyses a site's load time, web page size, i.e., the overall page size, which includes images, videos, and

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HTML code and the number of pages in the website, and then generate a score with recommendations to improve it [45]

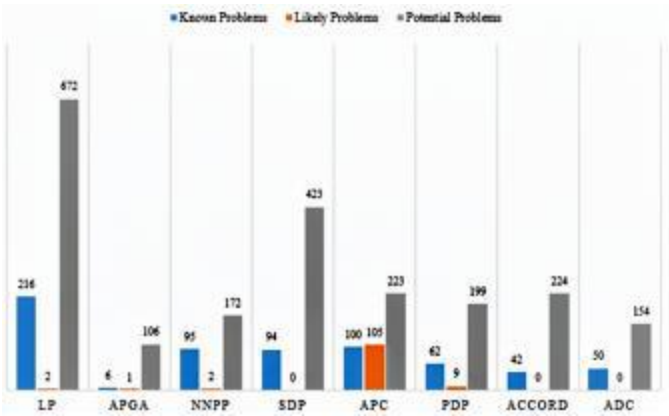

Fig 1: AChecker analysis and Results

IV. RESULTS AND DISCUSSION

The results of the accessibility and usability evaluation of the political websites in Nigeria are presented as follows.

A. *AChecker Results*

The analysis of the AChecker testing to the selected political websites against WCAG 2.0 is presented in Fig 1. It shows the known, likely, and potential errors represented as A, AA, and AAA conformance levels of WCAG 2.0.

From the results obtained, LP has a high number of known Problems which indicate a very high number of confirmed issues. The Likely Problems is almost negligible and the potential Problems is extremely high. The large number of known and potential problems suggests poor implementation or design flaws. It shows the site with ambitious accessibility intent but plagued by execution gaps. Users with disabilities may encounter severe barriers, reducing trust in the party's digital inclusivity.

APGA has few Known Problems which is very low confirmed issues, a negligible Likely Problems and low-to-moderate Potential Problems. Overall, it shows very poor ARIA/HTML5 adoption which implies lack of accessibility features rather than good design. The absence of known issues might reflect simplistic design rather than compliance. APGA's website risks being technically outdated and inaccessible, despite fewer flagged issues.

NNPP has high confirmed Known Problems issues, negligible Likely Problems and a moderate Potential Problems. NNPP faces substantial confirmed Problems, which directly affect users. With moderate potential issues, it shows structural weaknesses that may worsen over time if not fixed. Despite good visual readability (from first dataset), NNPP struggles with underlying technical issues.

SDP has a high confirmed Known Problems issue, no Likely Problems and very high potential problems. This implies SDP's site demonstrates systemic weaknesses: many confirmed and potential problems. It has combined with poor readability, this creates a very unfriendly user experience and the lack of "likely problems" suggests problems are either obvious (known) or deeply systemic (potential).

APC has a high confirmed issues Known Problems, a very high suspected issues of Likely Problems and a moderate Potential Problems. This implies that APC stands out because of very high "likely problems", indicating unstable or inconsistent implementation. This suggests sections of the site may behave unpredictably for users with assistive technologies. PDP has moderate confirm issues Known Problems, small but present Likely Problems and moderate Potential Problems. This shows that PDP's site has manageable issues compared to others, and combined with good visual readability, it may feel accessible to most users. The moderate problem levels suggest PDP is "average" but not forward-looking in accessibility.

ACCORD has relatively low Known Problems, no Likely Problems and moderate Potential Problems. ACCORD showing fewer known issues, suggesting a fairly clean website. However, potential problems are significant, meaning the site may not scale well or may fail under more complex accessibility audits. A risk-prone but functional site. ADC has few relatively Known Problems, 0 Likely Problems and moderate Potential Problems. This implies that ADC has a relatively clean profile, but the large number of potential problems suggests underlying structural weaknesses. When combined with poor contrast errors (from earlier dataset), the site still fails to deliver effective accessibility.

From the results above, the most problematic website is LP which has highest problems overall, especially potential problems (672), SDP with high confirmed and potential issues and APC is high across all categories, especially "likely problems." The relatively Cleaner Websites are APGA, ACCORD, ADC which fewer known issues, but this could reflect simplistic design rather than true accessibility and PDP with balanced, manageable issues. APC is imbalanced due to unusually high "likely problems," suggesting fragile accessibility. LP and SDP are structurally weak, both confirmed and potential. APGA has low issues but low accessibility adoption implies "false sense of compliance." Broader Implications is that of digital Inclusivity where high numbers of known and potential problems indicate structural neglect of accessibility. Voters with disabilities (visual, cognitive, motor) will face barriers

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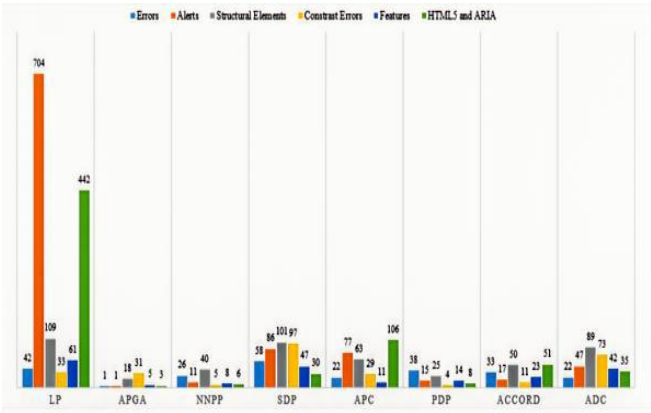

Fig 2 WAVE Analysis Tool Results

B. WAVE Results

WAVE compares the websites across six categories: Errors, Alerts, Structural elements, Contrast errors, Features and HTML5 & ARIA usage. The results are presented in Fig 2. Errors (Code/Validation Issues) is lowest in APGA. It shows almost no errors might reflect oversimplified design rather than quality. High error counts in LP, SDP, PDP suggest poorly validated HTML/CSS. This may cause usability and rendering inconsistencies. Alerts (Warnings for Accessibility/Code Quality) is highest for LP (704) which is abnormally high and moderately high for SDP (86), APC (77), ADC (47). It is Lowest for APGA (1). Alerts are not always fatal but indicate risky design practices. LP's 704 suggests very poor accessibility coding, while APGA's "1" may reflect minimal coding effort.

Structural Elements (Headings, Landmarks, etc.) is highest in LP (109), SDP (101), ADC (89) and lowest for APGA (18), PDP (25). A higher number usually means better content structuring (use of <header>, <main>, <nav>, <section>). LP and SDP look strong here, while APGA and PDP are structurally weak. Contrast Errors (Readability Issues) is highest for SDP (97) and ADC (73), lowest for PDP (4) and NNPP (5). High contrast errors make text difficult to read, especially for visually impaired users. PDP and NNPP websites are most readable, while SDP and ADC fail in basic accessibility. Features (Accessibility Enhancements) is highest for LP (61), Moderately high for SDP (47), ADC (42) and Lowest for APGA (5), NNPP (8). It implies that LP invested most in accessibility features, while APGA and NNPP neglected them.

HTML5 & ARIA (Modern Accessibility Standards) is highest in LP (442), APC (106), Moderate in ACCORD (51), ADC (35) and Lowest APGA (3), NNPP (6), PDP (8). Interpretation: LP and APC show strong commitment to modern accessibility coding. APGA, NNPP, and PDP websites are critically deficient in ARIA integration, meaning their sites are less accessible to assistive technologies like screen readers.

The best technical accessibility is LP (high ARIA adoption), though undone by errors, most balanced overall is APC (strong ARIA + moderate readability), Most readable are PDP and NNPP (very low contrast errors), the weakest is APGA (minimal structure, ARIA, and features which make it inaccessible) and worst readability are SDP and ADC (contrast failures make text hard to read). Table 2 shows the ranking of the websites based on the WAVE tools analysis.

C. *TAW Results*

The results for this are presented as problems, warnings and not reviewed. These are presented in figures 3, 4 and 5. Based on the results obtained, LP has 3 very low perceivable problems and 2 minimal warnings. LP performs well in WCAG compliance despite earlier datasets showing many technical issues. APGA shows minimal ARIA/HTML5 adoption. The low problems may reflect oversimplified site design rather than accessibility leadership. Risks being functionally inaccessible to screen-reader users despite low WCAG issues.

NNPP faces real accessibility failures across all WCAG categories. Users with disabilities will face barriers in both perception (contrast, images) and operation (keyboard/mouse use). This contradicts its fast performance earlier, showing speed does not equal inclusivity. SDP is one of the worst performers as users cannot easily see or operate the content. This aligns with earlier poor contrast and stability findings. It represents systemic exclusion of disabled users.

TABLE II
Final Ranking Based on Wave

Rank	Party website	Strengths	Weaknesses	Verdict
1st	**APC**	Strong ARIA (106), good structure	Moderate alerts, contrast errors	Best overall balance
2nd	**LP**	Highest ARIA (442), best structure	Too many alerts/errors	Ambitious but flawed
3rd	**PDP**	Most readable (contrast = 4)	Weak ARIA & structure	Readable but weak technically
4th	**ACCORD**	Moderate ARIA & features	Errors & contrast issues	Mid-level performer
5th	**NNPP**	Very readable (contrast = 5)	Very poor ARIA	Minimalist but accessible visually
6th	**ADC**	Strong structure (89)	Poor readability, many alerts	Structured but unreadable
7th	**SDP**	Strong structure (101)	Worst contrast (97), many errors	Organized but inaccessible
8th	**APGA**	Few errors/alerts	Almost no accessibility features	Oversimplified & exclusionary

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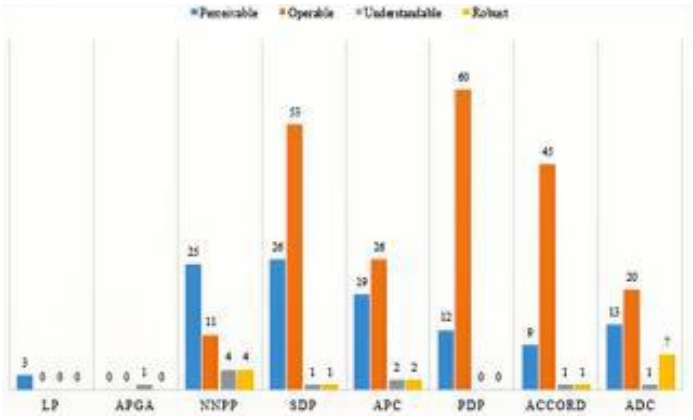

Fig 3 TAW Problems Analysis

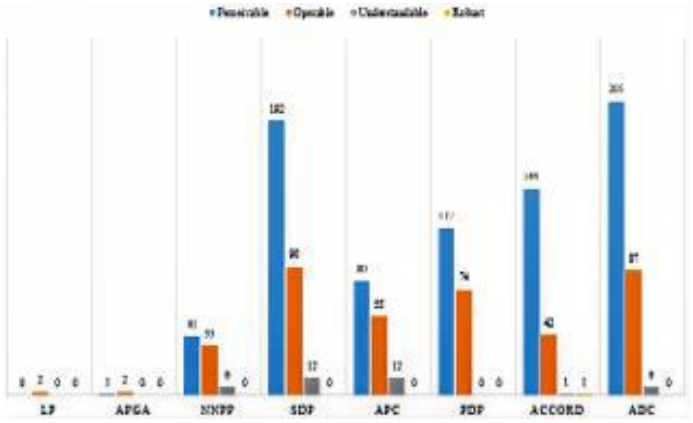

Fig 4: TAW Warning Analysis

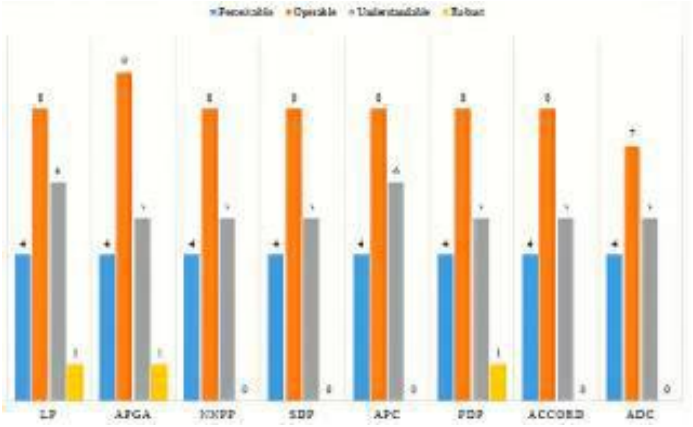

Fig 5: TAW Not reviewed Analysis

APC shows considerable accessibility warnings, meaning potential risks that could affect inclusivity. It reflects a site that tries to implement ARIA/HTML5 but struggles with execution quality. Must prioritize operability improvements (keyboard support, navigation). PDP is heavily operability-impaired (keyboard/mouse navigation issues). Users with motor impairments or those who rely on keyboard-only navigation will be excluded. It strongly reflects design without inclusivity testing.

ACCORD is visually unfriendly (contrast, images) and difficult to operate. Even though known problems are fewer than PDP/SDP, warnings suggest hidden risks. It needs urgent redesign for readability and navigation. ADC fails in both visual accessibility and operation. Robust issues mean it is also weak with assistive technologies which implies that screen readers may not work well. This further confirm ADC's poor performance and instability from earlier datasets.

LP and APGA are the best in WCAG Compliance (low problems) SDP, PDP ACCORD and NPPP are the worst in Problems (confirmed issues), while ADC, SDP and PDP are the worst in Warnings (potential risks) as the systemic risks that could worsen under different devices. Also, LP is technically compliant but undermined by earlier speed/stability issues. APGA has "low problems" due to simple design, not inclusivity leadership. SDP, PDP, ACCORD and ADC have serious accessibility barriers which implies that these are digitally exclusive websites.

APC is a moderate performer but must fix operability warnings to remain credible. Other observation is that in perceivability issues (SDP, ADC, ACCORD) visually impaired users cannot access text, images, or video. PDP, ACCORD and APC have Operability issues so keyboard-only users and those with motor impairments are excluded. NNPP, APC and ADC have understandability issues leading to confusing navigation and unclear content affect cognitive accessibility. ADC and NNPP also have Robustness issues which leads to poor compatibility with screen readers reduces inclusivity for disabled citizens.

For political parties, this is not just technical — it has democratic consequences as it can lead to exclusion of vulnerable groups from political participation. These

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TABLE III
FINAL RANKINGS FROM GTMETRIX RESULTS

Rank	Party	LCP (s)	TBT (ms)	CLS	Grade	Verdict
1st	**APGA**	1.1	0	0	A	Fastest and most stable site
2nd	**NNPP**	1.5	1000	0.07	B	Quick load, minor blocking
3rd	**ADC**	2.8	409,000	0.16	F	Structure fair, but catastrophic blocking time
4th	**PDP**	3.3	27,000	0.01	D	Stable layout, but very slow and unresponsive
5th	**APC**	3.2	1,150	0.31	F	Reasonable LCP, but high CLS and poor grade
6th	**SDP**	2.4	7,110	0.33	F	Structured but unstable and unresponsive
7th	**ACCORD**	11.5	1,500	0.42	F	Very slow load and unstable
8th	**LP**	17.7	2,250	0.44	F	Catastrophic load time, poorest perf

defects also show digital incompetence and unprofessionalism. Also, it limits global credibility as accessibility standards (WCAG, ADA, EU directives) are becoming universal benchmarks.

C. GTMetrix Results

In GTMetrix evaluation, the following metrics are used. Largest Contentful Paint (LCP) which measures how long it takes for the largest content element (i.e., a hero image or heading text) on the page to become visible within the visitors' viewport. It measures how long it takes for the main page to load. An LCP of 1.2 seconds or less is the best. LCD < 2.5s is good, while LCP of between 2.5 and 4s is moderate while LCP > 4s is poor.

Total Blocking Time (TBT) in seconds is a measure of how long scripts block user interaction. The lower the better, good value is usually < 0.2s. TBT indicate how much time is blocked by scripts during the page loading process. A TBT of 150 milliseconds or less is fine.

Cumulative Layout Shift (CLS) measures visual stability of the website while loading. That is how much layout shift is experienced as the web pages load. CLS of < 0.1 is good. CLS of 0.1–0.25 means improvement is needed while CLS > 0.25 is poor. Structure Score is the proprietary assessment of Lighthouse and Custom GTMetrix audits. It represents how well the page is built for optimal performance.

From the results shown in Table 3, LP with LCP of 17.7s is extremely poor (main content very slow to load). TBT of 2.25s implies high script blocking, poor interactivity, CLS of 0.44 means unstable visuals (content shifts) and Implications are that users face long waits, instability, and unresponsive pages which leads to very poor user experience. Accessibility suffers since long delays frustrate users with disabilities. It also damages credibility and engagement as people may abandon the site. APGA, LCP1.1s is excellent, TBT of 0 means no blocking scripts, CLS of 0 is perfect visual stability. APGA's site is highly optimized for speed and stability. However, earlier analyses showed lack of HTML5/ARIA support, meaning performance is great but accessibility features are missing. Good technical performance but excludes disabled users.

NNPP with LCP of 1.5s implies excellent, TBT of 1s means a bit high, but manageable and CLS of 0.07 is good stability. It is a fast, stable and user-friendly site. Slightly heavier scripts affect interactivity, but overall, a good experience. Better balance between performance and usability than most parties. SDP is LCP 2.4s is acceptable, TBT is 7.11s is very high script blocking which implies delays interactivity. CLS of 0.33 means poor stability. Page loads content at first but becomes unresponsive for several seconds. Users may experience click delays and shifting layouts thus leading to a frustrating experience. It also shows weak optimization and poor-quality assurance.

APC is LCP is 3.2s is moderate which is slightly slow, TBT of 1.15s high as it affects usability. But the CLS 0.31 is poor stability. Despite strong ARIA usage (from earlier analysis), APC's page performance is failing. This mismatch suggests heavy or unoptimized content/scripts. Accessibility improvements are undermined by poor speed and stability.

PDP LCP of 3.3s is moderate, TBT of 27s is extremely poor (page unresponsive for a long time). CLS of 0.01 is excellent stability. The site is visually stable but unresponsive for interaction due to blocking scripts. Creates frustration for users on slower devices. PDP must optimize JavaScript for accessibility and performance. ACCORD LCP is 11.5s which is extremely poor, TBT of 1.5s is too high and CLS of 0.42 is poor stability. It is one of the slowest and most unstable sites. This means there is poor optimization which implies that many users (especially on mobile) will abandon it. Damages digital image and limits reach. ADC with LCP of 2.8s is moderate, TBT of 409s is catastrophic which make the site essentially unresponsive. With CLS of 0.16 an improvement is needed. The extremely high TBT makes the site practically unusable. Even if content loads, users cannot interact. Suggests deep technical flaws or server misconfigurations.

In overall APGA is the fastest and most stable. NNPP is also fast, with slight blocking. PDP has stable visuals but unresponsive. On the other hand, LP, SDP, APC, ACCORD,

ADC websites are slow, unstable, and unresponsive. LP and ACCORD are the worst and ADC is catastrophic. ADC is almost unusable due to interactivity failures. APGA is good speed but poor accessibility features (previous dataset). APC and LP are strong ARIA adoption but fail in performance, undermining inclusivity.

Sites with F grades risk very high bounce rates, especially on mobile which lead to users' abandonment. Also, slow, unstable sites make parties look unprofessional and unprepared for modern digital engagement. Poor performance disproportionately harms disabled users, older voters, and those on low-bandwidth networks. The overall results for this are shown in Table 3 with APGA topping the table and LP coming last under this tool. Generally, most Nigerian political party websites fail web performance standards, making them inaccessible and unengaging for large sections of the population.

These findings are consistent with prior research that stresses the incompleteness of any single automated tool and the need for complementary approaches. Vigo et al., [46] found that different automated accessibility checkers capture distinct subsets of WCAG success criteria, with low overlap. Similarly, Alajarmeh [9], Vigo and González-mora et al. [47] noted that automated evaluation must be supplemented with manual inspection to capture semantic, contextual, and assistive-technology issues that automated tools cannot detect.

V. Conclusion

The increasing reliance on web technologies has placed accessibility, usability, and performance at the forefront of political party communication. This study assesses the usability and accessibility of eight political party websites in Nigeria, employing four automated tools: AChecker, Web Accessibility Evaluation (WAVE), Test Accessible Web (TAW) and GTMetrix.

The tools used in the study provide complementary insights: AChecker offers systematic validation against WCAG guidelines with classifications of known, likely, and potential problems; WAVE provides in-page visual overlays that highlight accessibility features and violations; TAW generates detailed WCAG-based compliance reports; and GTMetrix (powered by Google Lighthouse) measures performance metrics such as Largest Contentful Paint (LCP), Total Blocking Time (TBT), and Cumulative Layout Shift (CLS) while flagging accessibility-related issues linked to responsiveness and stability

The findings reveal significant disparities across the websites. APC emerged as the most balanced, with strong HTML5/ARIA adoption and moderate structural soundness, though its performance was weakened by slow load speeds (LCP 3.2s, CLS 0.31). PDP excelled in readability, recording the lowest contrast errors (4) and stable layouts, but lacked accessibility features and suffered from responsiveness failures (TBT 27s). LP demonstrated the highest ambition in accessibility adoption (442 ARIA elements, 61 features) but was undermined by excessive alerts (704) and poor optimization (LCP 17.7s, F grade). NNPP and APGA prioritized speed and readability, with fast LCP values (1.5s and 1.1s respectively), but both offered minimal accessibility support (ARIA ≤ 6), excluding users who rely on assistive technologies. ACCORD and ADC performed poorly overall, with ADC's catastrophic TBT of 409 seconds rendering the site virtually unusable. SDP demonstrated solid structure (101) but had the worst contrast errors (97) and numerous WCAG failures, making it systemically inaccessible.

WebAIM [43] emphasizes that contrast errors and structural issues strongly correlate with user-reported barriers, while GTMetrix documentation highlights that performance bottlenecks (long TBT, unstable CLS) directly undermine accessibility by delaying interaction readiness. Overall, the evaluation shows that no Nigerian political party website fully meets modern accessibility and performance standards.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

AUTHOR(S) CONTRIBUTION STATEMENT

All the authors contributed one way or the other in the preparation, drafting, reading, analysis, writing and proof reading the manuscript.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ETHICS STATEMENT

This study did not require ethical approval.

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